Academics say flying to meetings harms the climate — but they carry on

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Air travel to attend academic conferences remains widespread although many meeting-goers have reservations about emissions.Credit: Liesa Johannssen/Bloomberg/Getty

An overwhelming majority of survey respondents at a top research university agree that air travel contributes to climate change, but many — especially professors and PhD students — often fly to conferences anyway, according to a study[1] published last month in *Global Environmental Change*[1].

Flying is one of the most emissions-intensive activities that people undertake. A 2021 study[2] found that aviation was responsible for about 4% of human-generated global warming so far. Another analysis found that in 2013, the top 10% of frequent flyers accounted for an estimated 45% of global greenhouse-gas emissions from air travel. Researchers say that institutions and conference organizers should embrace alternatives to reduce the carbon footprint of academia.

“We fly lots, and we say that we shouldn't,” says Jonas De Vos, a transport geographer at University College London (UCL) and the first author of the latest study. “We are hypocrites.”

Taking to the sky

De Vos and his colleagues used social media and UCL newsletters to send a survey to all of the university’s staff and students. Participants filled out a questionnaire about their travel habits, and stated how closely they agreed

with a set of 17 statements about attending conferences. The team analysed responses from 1,116 PhD students and staff who carry out research, teaching or both, and sorted them into clusters based on their attitudes towards academic travel.

As a climate researcher, should I change my air-travel habits?

More than 80% of participants agreed that air travel is environmentally detrimental, yet in 2022, more than 35% of respondents flew to at least one meeting. The largest cluster, with 294 respondents, are 'involuntary flyers', meaning that although they prefer to travel by train, they tend to fly to conferences. The authors also found that professors and PhD students prefer in-person events and fly frequently to international meetings. Teaching and research staff tend to travel less frequently, and typically by train, to nearby destinations; the same is true for female respondents as a group.

"It's the first time that this gap between attitudes and behaviour is actually addressed in a very direct way," says Sebastian Jäckle, a political scientist at the University of Freiburg, Germany, who once cycled to a conference in Poland. To get a more representative sample, he suggests carrying out surveys at more universities.

Although the survey did not ask participants to explain why they fly to conferences, De Vos says that researchers have a "fear of missing out" on opportunities to present their research and network with potential collaborators. "International mobility is often still important for promotion, for getting funding for research grants," he says.

Powered by jet fuel

In-person international conferences still largely run on fossil fuels. The Radiological Society of North America meeting in 2017, for instance, drew more than 20,000 scientists to Chicago, Illinois, and accounted for at least 39,500 tonnes of carbon-dioxide emissions from flights[3].

Studies disagree on whether flying to meetings helps researchers to achieve academic success. A survey[4] of 6,000 scientists in France found a positive link between air travel and a measure of scholarly impact called the *h*-index, suggesting that travelling is how early-career researchers gain visibility and senior researchers sustain it. But another survey[5] of 705 academics at the University of British Columbia in Vancouver, Canada, found no causal relationship between air travel and academic success.

How those researching adaptation to climate change might reduce their own carbon footprints

Scientists pushing for reductions in air travel acknowledge the benefits of attending meetings in person — and few want to end such travel entirely. Susann Görlinger co-founded iilo, a non-profit body based in Zurich, Switzerland, to help organizations reduce flight emissions. She suggests that institutions establish carbon budgets and share it among researchers on the basis of need. “People who still have to build up their career probably need a bit more budget than senior people,” she says.

Just as important, Görlinger says, is for conference organizers to offer alternatives such as high-quality virtual and hybrid meetings, as well as multi-hub meetings accessible by taking a train to the nearest big city. Switching to such alternatives could also make networking opportunities more inclusive for researchers with limited funds and those who are caregivers, she says.

Although individuals can make better travel choices, academic culture still needs to change to reduce its carbon footprint, Jäckle says, because “as long as it is necessary to have international conferences on your CV to get a professorship, the individual actually can’t do that much.”

References

1. De Vos, J., Hopkins, D., Hickman, R. & Schwanen, T. *Glob. Environ. Change.* **88**, 102908 (2024).

   Article Google Scholar

2. Klöwer, M., *et al. Environ. Res. Lett.* **16**, 104027 (2021).

   Article Google Scholar

3. Yakar, D. & Kwee, T. C. *Eur. J. Radiol.* **125**, 108869 (2020).

   Article PubMed Google Scholar

4. Berné, O. *et al. Environ. Res. Lett.* **17**, 124008 (2022).

   Article Google Scholar

5. Wynes, S., Donner, S. D., Tannason, S. & Nabors, N. *J. Cleaner Prod.* **226**, 959–967 (2019).

   Article Google Scholar

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